



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS TEXAS 75202-2733

November 21, 1998

**FINDING OF NO SIGNIFICANT IMPACT**

**To Interested Agencies, Officials, Public Groups and Individuals,**

The U.S. Environmental Protection Agency (EPA) has performed an environmental assessment in accordance with Code of Federal Regulations, Title 40, Part 6, "*Procedures for Implementing the Requirements of the Council on Environmental Quality on the National Environmental Policy Act*," for the following proposed action:

**Proposed Action:** The Vado/Del Cerro Wastewater Collection and Treatment Facilities project to be funded through a New Mexico Colonias Wastewater Construction Grant Program (CWCGP) partially funded by the EPA and administered by the New Mexico Environment Department (NMED).

**Applicant:** Communities of Vado and Del Cerro in Doña Ana County, New Mexico  
NMED Project Number 193004

<u>Total Estimated Project Capital Cost</u>	<u><b>\$6,439,127.00</b></u>
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**Proposed Project.** Vado and Del Cerro are unincorporated communities in Doña Ana County, New Mexico, without a sewerage system. Residents use septic tanks and cesspools which are not properly sized, sealed or constructed to meet State or county standards. Untreated sewage is allowed to run onto the ground, and the shallow water table and rapid increase in the density of septic tanks and cesspools have raised concern over the potential health risks. These on-site wastewater disposal systems are suspected of being a main source of the ground water contamination. Because most potable water used in New Mexico comes from subsurface wells, protection of ground water from contamination is given a high priority. The purpose of the proposed Vado/Del Cerro project is to provide a centralized wastewater collection and treatment system to ensure and maintain adequate public and environmental health standards. The proposed project will construct a 0.88 million gallons per day (MGD) peak flow oxidation ditch wastewater treatment plant on a five-acre tract of land presently used for agricultural production, and install a conventional gravity sewage collection system. The discharge of the treated effluent will be to the Rio Grande River. Drinking water for the planning area is provided by the Mesquite Municipal Water Authority (MMWA).

Vado, Del Cerro and the surrounding area, called Vado 4, have been designated "colonias" because of the substandard living conditions, inadequate water and sewerage systems, and their location within 100 kilometers of the U.S./Mexico border. The project area is situated

between Interstate Highway 10 (IH-10) and the Rio Grande River in extreme south-central New Mexico, approximately halfway between the cities of El Paso, Texas and Las Cruces, New Mexico. The Berino "colonia," currently in the process of environmental review for approval of their Colonias Program, is located just south of Vado. Although the project area is firmly defined, community boundaries for Vado and Del Cerro are uncertain, primarily due to the unincorporated and undefined nature of the area. Growth and construction in the area is essentially unregulated and the poor conditions of the area are expected to deteriorate as unchecked expansion continues. In 1996, the project area had population of about 5,488, which projected to reach 6,859 by the year 2000, and 12,000 by the year 2010.

**Finding.** On the basis of this assessment, the EPA finds that proposed project to be consistent with the approved Water Quality Management Plan, and concurs with a Finding of No Significant Impact (FNSI) and the recommended alternatives. The Regional Administrator has determined that the funding assistance to the communities of Vado and Del Cerro will not result in significant adverse impacts on the environment and that an Environmental Impact Statement (EIS) is not warranted. No new factors or issues have been introduced into the proposed action to alter the finding or to require an increase to the scope of the assessment. This evaluation is based primarily on the environmental assessment prepared in August 1997 by the NMED, Construction Programs Bureau for the CWCGP funding of the proposed Vado/Del Cerro wastewater facilities, the Vado/Del Cerro Wastewater Facilities Plan and Environmental Information Document (EID) prepared by Wilson and Company, and other sources as listed under "References" of the assessment.

Comments regarding this decision not to prepare an EIS will be accepted during the thirty (30) day period following the public notice of this FNSI. This preliminary FNSI will become final after the 30-day public comment period expires if no new information is provided to alter this finding. No administrative action will be taken on the project for at least thirty calendar days after the release of this FNSI. A final decision will be made after all the written comments received have been evaluated. Address all comments and requests for review of the administrative record supporting this determination to:

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**ENVIRONMENTAL ASSESSMENT  
OF THE WASTEWATER FACILITIES  
PROPOSED FOR THE COMMUNITIES OF  
VADO AND DEL CERRO IN  
DOÑA ANA COUNTY, NEW MEXICO**

United States Environmental Protection Agency  
1445 Ross Avenue  
Dallas, Texas 75202

Approved: // S - J.Clifford// 11/13/98  
Greg Cooke  
Regional Administrator Date

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## 1.0 PURPOSE AND NEED FOR ACTION

### 1.1 General Information.

**Proposed Action:** The Vado-Del Cerro Wastewater Collection and Treatment Facilities project to be funded through a New Mexico Colonias Wastewater Construction Grant Program (CWCGP) partially funded by the U.S. Environmental Protection Agency (EPA) and administered by the New Mexico Environment Department (NMED).

**Applicant:** Communities of Vado and Del Cerro in Doña Ana County, New Mexico  
NMED Project Number 193004

**Total Estimated Project Capital Cost:** **\$6,439,127.00**

**1.2 Proposed Project.** Vado and Del Cerro are unincorporated communities in Doña Ana County, New Mexico, without a sewerage system. Residents use septic tanks and cesspools which are not properly sized, sealed or constructed to meet State or county standards. Untreated sewage is allowed to run onto the ground, and the shallow water table and rapid increase in the density of septic tanks and cesspools have raised concern over the potential health risks. These on-site wastewater disposal systems are suspected of being a main source of the ground water contamination. Because most potable water used in New Mexico comes from subsurface wells, protection of ground water from contamination is given a high priority. The purpose of the proposed Vado/Del Cerro project is to provide a centralized wastewater collection and treatment system to ensure and maintain adequate public and environmental health standards. The proposed project will construct a 0.88 million gallons per day (MGD) peak flow oxidation ditch wastewater treatment plant on a five-acre tract of land presently used for agricultural production, and install a conventional gravity sewage collection system. The discharge of the treated effluent will be to the Rio Grande River. The proposed project will alleviate surface and ground water contamination from the facility planning area from pollutants from on-site wastewater disposal systems. In some parts of the planning area the depth to ground water ranges between 5 to 10 feet. Drinking water for the planning area is provided by the Mesquite Municipal Water Authority (MMWA).

Vado, Del Cerro and the surrounding area, called Vado 4, have been designated “colonias” because of the substandard living conditions, inadequate water and sewerage systems, and their location within 100 kilometers of the U.S./Mexico border. The project area is situated between Interstate Highway 10 (IH-10) and the Rio Grande River in extreme south-central New Mexico, approximately halfway between the cities of El Paso, Texas and Las Cruces, New Mexico (Fig.1). The Berino “colonia,” currently in the process of environmental review for

approval of their Colonias Program, is located just south of Vado. Although the project area is firmly defined, community boundaries for Vado and Del Cerro are uncertain, primarily due to the unincorporated and undefined nature of the area. Growth and construction in the area is essentially unregulated and the poor conditions of the area are expected to deteriorate as unchecked expansion continues. In 1996, the project area had population of about 5,488, which projected to reach 6,859 by the year 2000, and 12,000 by the year 2010.

**1.3 Recommendation.** The U.S. Environmental Protection Agency (EPA) has performed an environmental assessment (EA) in accordance with Code of Federal Regulations, Title 40, Part 6, "*Procedures for Implementing the Requirements of the Council on Environmental Quality on the National Environmental Policy Act*," of the environmental assessment prepared by the NMED Construction Programs Bureau for the proposed construction of the wastewater facilities for the communities of Vado and Del Cerro in New Mexico. On the basis of the assessment, the Regional Administrator has determined that the funding assistance will not result in any significant adverse impact on the environment and that an Environmental Impact Statement (EIS) is not warranted. The EPA concurs with the recommended alternatives and finds the proposed project to be consistent with the EPA approved Water Quality Management Plan. Other sources of data for this assessment are the Vado/Del Cerro Wastewater Facilities Plan, the Environmental Information Document (EID) prepared by Wilson and Company of Albuquerque, New Mexico.

## **2.0 ALTERNATIVES.**

### **2.1 Alternatives Considered by the EPA.**

Approve the Funding for the Project as Proposed. EPA can recommend approval of the grant funding for the proposed purpose.

Funding of a Modified Project. Information received during the EA process could result in the identification of significant adverse impacts that require modification. Modification of the project to mitigate the impacts may allow the EPA to accept the project as modified and recommend approval of the grant funding.

No Action. A determination that the project as proposed could result in potentially significant adverse impacts to the environment that cannot be satisfactorily mitigated would preclude a recommendation of approval of the grant funding. Instead, an EIS would be recommended to evaluate the potentially significant impacts. The EIS process includes a scoping meeting to identify critical facts and issues, a Draft EIS, a public comment period on the Draft EIS, a public hearing on the Draft EIS, the Final EIS, a public comment period on the Final EIS, and a Record of Decision.

### **2.2 Alternatives Considered by the Applicant.**

Collection Systems. The following four collection system alternatives were evaluated and

ranked according to capital costs, reliability, energy required and feasibility (see Table 1, below):

**Conventional Gravity System.** In a gravity sewer system, raw wastewater is directed by gravity from pipe connections to houses and other buildings, to an interceptor or main sewer line located in the public right-of-way. This gravity collection system was recommended because of lower cost, proven reliability, high familiarity, and lower user cost. The total capital cost for the collection system has been estimated as \$4,331,908.00.<sup>1</sup>

**Small-Diameter Variable-Slope Sewers (SDVS).** Considered a relatively new technology, the SDVS collection system consists of interceptor tanks and small diameter collection mains. The interceptor tanks remove grease and settleable solids from the raw wastewater. Wastewater is then discharged from each tank via gravity or by use of a pump to gravity collection mains usually located in the public right-of-way. This system would require the installation of approximately 473 new septic tanks since approximately thirty-five percent of the residences do not have septic tanks; approximately sixty-six percent of the existing tanks are over five years old.

**Vacuum Sewer System.** This collection system is a mechanized system that uses differential air pressure to transport the wastewater. The system requires a normally closed interface valve at each entry point to seal the lines so that a vacuum is maintained. The additional mechanical parts involved in these systems, coupled with the lack of qualified technicians and lack of familiarity with the system make this system less desirable than the conventional gravity system.

**Pressure (Grinder Pump) Systems.** This type of system is also used in conjunction with septic tanks, but involves the installation of a grinder pump at each inlet to the pressure main, typically at the residence. Not only does this introduce an added expense of power and maintenance requirements, but the majority of the residences in the area are mobile homes and recreational vehicles without existing or adequate electrical systems to support the pumps.

TABLE 1

COLLECTION SYSTEMS				
SYSTEM	Capital Cost	Reliability	Energy Required	Implementability
SDVS	3	2	2	2
Gravity	1	1	1	1
Vacuum	2	2	2	1
STEP	3	3	3	3

Ranking Scale: 1 Best/Highest  
2 Acceptable  
3 Poorest/Lowest

\* Small-Diameter Variable-Slope Sewers (SDVS)  
\*\* Septic Tank Effluent Pump (STEP)

**Discharge of Treated Effluent Alternatives.** Four methods for disposing of the treated effluent were considered in association with the proposed project.

**River Disposal.** The project area's proximity to the Rio Grande makes it convenient to locate the treatment plant near the river and dispose of the effluent into the river. The discharge must meet the National Pollutant Discharge Elimination System (NPDES) permit effluent limits.

**Irrigation Drain Disposal.** The Elephant Butte Irrigation District charges a disposal fee, based on volume and an O&M component, on a case-by-case basis provided the effluent meets standard 30/30 criteria. With the proximity of the project area to the Rio Grande, this option would add an estimated \$871.00 per month to the cost of the proposed project.

**Reuse/Irrigation.** Although it is desirable to reuse system effluent for such activities as irrigation, this alternative is not always viable. The reuse of treated effluent is limited to "non-food crops" such as cotton and other such crops, limiting the amount of acreage available for irrigation. Coupled with the time period during which irrigation can be used, the installation of pipeline system needed to support this alternative would not be cost effective.

**Wetlands Facility.** Agricultural land in New Mexico is very valuable because of its relative scarcity. In order to use a wetlands system for liquid disposal in the project area, an estimated 40 acres of land would be needed. In addition to the cost of the land, the cost of installing a collection system incorporating septic tanks would be very expensive. According to a survey, approximately thirty-five percent of the residences do not have septic tanks, and approximately sixty-six percent of the existing tanks are over five years old. The project would have to include installation of approximately 473 new septic tanks.<sup>2</sup> Other concerns with this alternative were that compliance with ground water discharge regulations could not be assured, and potential odor problems.<sup>3</sup>

**Treatment Systems.** Six wastewater treatment alternatives, including "No Action", were evaluated for this proposed project. The "No Action" alternative was rejected because of the potential for further ground water contamination in the area, and potential adverse impact on public health as the population continues to increase."<sup>4</sup> The remaining five options considered were: oxidation ditch, trickling filter, sequencing batch reactor, aerated lagoons, multiple/cluster on-site treatment systems.

**Oxidation Ditch.** This is a biological treatment process, using microorganisms to breakdown wastes, that consists of a ring- or oval-shaped channel equipped with mechanical aeration devices. Screened wastewater enters the ditch, is aerated, and circulates around the ditch. The system relies on long detention and solids retention times using secondary sedimentation tanks. An oxidation ditch is the recommended treatment system because of low operation and maintenance costs, easy operation and the stability of the sludge produced. Capital costs for this treatment alternative are \$2,107,219. The operation and maintenance costs for the process over a 20-year design life of the project is \$1,933,040. The total cost of this treatment alternative is



\$4,040,259.<sup>5</sup>

**Trickling Filter.** This system consists of a bed of a highly permeable medium to which micro-organisms are attached and through which wastewater is percolated or trickled. The filter media usually consists of either rock or a variety of plastic packing materials. Filters are constructed with an underdrain system for collecting the treated wastewater and any biological solids which become detached from the media. This is a low cost system well suited for the warm temperatures in the project area, and it is capable of producing effluent which meets secondary limits. The major limitation of this process is sludge handling. The raw sludge produced in the primary clarifier will require significant treatment, which if handled on site would increase the costs. Plus, there are other concerns with nuisance controls to eliminate odors, vector attraction, etc. The capital cost of this alternative is \$2,151,141. The annual operation and maintenance cost for the project over a 20-year design life is \$1,693,840. The total cost for this treatment alternative would be \$3,844,981. The sludge treatment requirement was the primary reason for rejecting this alternative.<sup>6</sup>

**Sequencing Batch Reactor Facility.** The sequencing batch reactor is a fill-and-draw type system using a single complete-mix reactor in which all steps of the activated sludge process occur, thereby eliminating the need for separate secondary sedimentation tanks. This option has similar power costs to the Oxidation Ditch, but has more operation requirements as well as additional treatment to prevent excessive odors and other nuisances. The capital cost of this alternative is \$1,951,562. The operation and maintenance cost over the 20-year design life of the project is \$2,701,440. The total cost for this alternative is \$4,653,002. This alternative was rejected because of the “low-tech facility” criteria which would enable operation by local communities without the need for higher skilled operators and operator.<sup>7</sup>

**Aerated Lagoons.** An aerated lagoon is a basin in which wastewater is treated either on a flow-through basis or with solids recycle. The essential function of this process uses surface aerators or diffused air units to supply oxygen for conversion of the wastes. The turbulence created by the aeration devices maintains the wastes in suspension. The capital cost of this alternative is \$2,130,385. The operation and maintenance cost over the 20-year design life of the project is \$2,609,320. The total cost for this alternative is \$4,739,705. The aerated lagoon alternative was rejected because of the increased manpower required for filter maintenance, greater potential for odors, and the amount of land required.<sup>8</sup>

**Multiple/Cluster On-site Treatment Systems.** This treatment alternative consists of three areas or “clusters” of dwelling units served by septic tanks. The reasons for rejecting this alternative are that the system will not serve all existing residents and electrical service is in the area inadequate for accommodating the pumps.

### **3.0 AFFECTED ENVIRONMENT AND PREDICTED ENVIRONMENTAL IMPACTS**

#### **3.1 Land Resources.**

Land Use. Vado and Del Cerro are in the Mesilla Valley of the Rio Grande in an area defined as the Mesilla Bolson of the Basin and Range Province. The Rio Grande River follows a well defined geologic feature called the Rio Grande Rift that goes from southern Colorado to the Mexican border. This rift has resulted in a gradual sinking of the earth's surface along its length, creating a series of basins through which the Rio Grande flows. The river has cut over 300 feet into the floor of the Mesilla Bolson, resulting in the Mesilla Valley.

The Mesilla Valley is a wide floodplain of fertile bottomland with an elevation ranging from about 3,700 feet to 4,400 feet above mean sea level (msl) in the area. The Mesilla Valley is a productive agricultural area that supports the urban areas of Las Cruces, El Paso, Ciudad Juarez, Mexico, as well as smaller communities. The project area is predominantly rural residential with a long history of dairy farm and agricultural activities. Elephant Butte Irrigation District was created to provide water to the area through a system of canals and drainage ditches. The area is protected from flooding by the levees along the Rio Grande. Vado is less than 0.5 miles from the river, while Del Cerro is approximately two miles away. The descriptions of the existing environment apply to the entire Rio Grande Valley area in general.

Soils. Soils in the Mesilla Valley are fertile soils with a shallow water table and support a lush riparian vegetation. On-site soils are generally deep, nearly level, well drained soils of alluvial material in the Rio Grande floodplain. As the land rises to the east, soils are made up of a combination of valley alluvial materials and material brought down from the hill slopes in alluvial fans. The diversity of soils is a result of the historical migration of the river throughout the valley. Area soils consist primarily of Ag-Agua loam, which is a deep, well drained, nearly level soil that form in mixed alluvium on the floodplain of the Rio Grande. Areas of this soil have been leveled for irrigated cropland and are protected from the flood waters by dams and levees. Permeability is moderate and the available water capacity is moderate. The Ap-Anthony-Vinton fine sandy loam soils formed in alluvium and are deep and well drained with moderately rapid permeability. The Bs-Brazito soils are very fine sandy loam, thick surface soils with rapid permeability. Hg-Harkey soils are deep sandy loam soils with moderate permeability.

Land Use Changes. The Vado 4 area, adjacent to the Vado/Del Cerro area, is also a designated colonia and consists primarily of trailers and mobile homes. It is generally considered the worst colonia in the county because of poor access and total lack of public works infrastructure. The Vado 4 area is expanding rapidly with and without county permits as more trailers move into the area daily. Several acres are being developed with new subdivisions.

There will be no adverse impact on the pattern and type of land use, or the growth and distribution of population. Long term impacts associated with this project will be minimal and will not be significantly adverse because all construction will occur in established, disturbed

areas. During construction exposed soils will be susceptible to wind and water erosion. Consequently, soil stabilization measures will be taken to reduce both types of erosion.

### **3.2 Water Resources.**

The lower Rio Grande Valley in New Mexico is part of the Southern Desert Regional Zone. Climate of the region is semi-arid typified by sunny days, hot summers with cool evening, mild winters, low rainfall, and high evaporation rates. The mean annual evaporation is over ninety-three inches per year, with an average annual precipitation of less than eight inches.

Surface water quantity. There are no surface water impoundments in the planning area. The closest water course is the Rio Grande which is to the west. The three drains or channels in the project area flow from north to south, but are mostly dry except during irrigation season. Potable water for the area is provided by the MMWA from wells ranging in depth from 260 to 874 feet. The water quality is good, with total dissolved solids at 300 parts per million.

Ground water. Ground water generally flows from north to south in the project area, at depths ranging from five to ten feet along the valley floor. The depths extend to over fifty feet as the land surface rises towards IH-10. Shallow ground water sampling conducted by the NMED in 1978 to evaluate possible contamination from solvents detected xylene, toluene, benzene, and nitrate levels ranging from 0.01 to 62.0 mg/l Nitrate-N in some of the samples. Recent sampling showed all Volatile Organic Chemical (VOC) levels below detection limits, and all nitrate levels below 0.1 mg/l. Depth to significant ground water in the area ranges from 25 to 100 feet.

Currently, wastewater in the project area is treated by on-site septic tanks or cesspools through percolation. As the population of the planning area increases, the threat of ground water contamination from these on-site wastewater disposal systems will increase. The proposed project will diminish or eliminate the degradation of ground water and will improve its quality by eliminating the use of septic tanks, leachfields, and open dumping of sewage.

Wastewater. The wastewater will be collected, treated and discharged to Rio Grande Basin Segment No. 2-101, which had been identified as a water quality limited stream segment.<sup>9</sup> Limited Warm Water Fishery and Irrigation are designated uses which were not fully supported by this stream segment. The data that has been collected since then demonstrates that the stream segment fully supports all designated uses.<sup>10</sup>

Flows from the planning area are expected to average 0.44 MGD, but will not exceed the 0.88 MGD design capacity of the treatment plant. No significant infiltration or inflow into the system is expected from the seasonal storm events, and there are no significant commercial or industrial flows in the planning area, with few expected in the future. The proposed action would improve the water quality of the communities. Construction of the proposed sewerage system will diminish the threat of nitrate ground water contamination from the on-site systems.

Five acres of land will be needed for the treatment facilities and one quarter will be needed for the pump station. A site specific storm water pollution prevention plan and a Notice of Intent to discharge storm water from the site will be required since the construction site is over five acres or more.<sup>11</sup> Sediments generated by construction, and the associated erosion and siltation of area waterways will be controlled by the best available control standards, such as temporary settling pits, dikes, and berms. Prompt backfilling of trenches and protecting soil stockpiles will also serve to reduce any potential problems. The New Mexico Interstate Stream Commission has expressed concern that the return flow from ground water to surface water would ultimately result in the water being carried out of the state.

### **3.3 Air Quality.**

Ambient Air Quality. Doña Ana County is located within New Mexico State designated Air Quality Control Region (AQCR) Number 6, which corresponds to EPA Region 153. The AQCR has been classified by the EPA as an attainment area for ozone, airborne particulate matter (PM<sub>10</sub>), carbon monoxide, hydrocarbons, sulfur dioxide, nitrogen dioxide, and lead which indicates that the ambient air quality meets or exceeds the National Ambient Air Quality Standards. Southern Doña Ana County is part of the Rio Grande valley agricultural belt and has little industrial activity to contribute emissions into the ambient air. Fugitive dust from the seasonal dust storms have caused the health-based PM<sub>10</sub> air quality standard to be exceeded. However, under a new EPA policy, the area may be designated a “natural event area” rather than a “non-attainment area.” During construction carbon monoxide and nitrogen oxide emissions from tractors and trucks can be expected. Windblown dust can also be expected because of the disturbances of the soil. These emissions are not expected to be a problem.

Dust problems can be minimized by using appropriate dust suppression techniques and by scheduling construction activities during the less windy times of the year - July, August, September.<sup>12</sup> There are fewer exceedances of the PM<sub>10</sub> standard in July through September. The period of December through February would be better for construction than the months of March through June, and October and November, which are the windier months of the year. Odors are experienced from overflowing cesspools and septic tanks in the area. The impact of this project to air quality is temporary and minimal. The project will have no significant adverse impact on air quality.<sup>13</sup>

Noise. There are no significant contributors to air and noise pollution other than from traffic in the area. Construction of the project will generate an increase in noise levels, however the effects will be temporary and insignificant.

### **3.4 Biotic Resources.**

The area is typical of the Mesilla valley which is primarily an irrigated, agricultural area. The primary crops are cotton and alfalfa. At least 200 species of vascular plants in two distinct vegetation groups can be expected within the general area. The most widespread vegetation is of

Chihuahuan desert origin and is typical of many areas in southern New Mexico and the Trans-Pecos Region of Texas. Numerous succulents, xerophytic shrubs, and arid land grasses dominate the flora, intermixed with ephemeral annual species. The second major class of vegetation within the project area is the riparian species associated with the perennial waters of the Rio Grande. These are typically phreatophytic trees and shrubs, as well as a variety of hydrophytic and mesophytic forbs. The three plant communities within the project area are agricultural with heavy human impact (AGHI), disturbed lands mostly dominated by summer cypress and tumbleweed (DIS), lowland in the floodplains (DITA) which is a wetland community dominated by salt grass.

Fish and Wildlife Protection. Approximately 138 birds, thirty-four mammals, twenty-eight reptiles, seven amphibians, and eight fish species could occur in the general area. Many of these species are migratory and would appear within the project area only at specific times of the year. The direct impacts of the proposed project would primarily result from the temporary or permanent removal of habitat and species at the five acre construction site.

The Rio Grande lies outside of the facility planning area and the proposed project will not result in the control or structural modification of any natural stream or body of water. The U.S. Fish and Wildlife Service (FWS) has determined that the proposed project will have no effect on listed species, wetlands, or other important wildlife resources.<sup>14</sup> There are no significant impacts on the biology, wildlife habitat, or any endangered species expected from the project activities.

Endangered Species. The area between Las Cruces and El Paso is part of the Rio Grande agricultural belt which has undergone intense agricultural and urban development. The FWS has determined that the proposed project will have no effect on listed species, wetlands, or other important wildlife resources.<sup>15</sup> Although the project will have no significant adverse impact on endangered species, all future financial assistance activity will be conditioned to require that should either threatened or endangered plant or animal species be encountered during construction, work shall be halted and the EPA, FWS, NMED will be notified in order that they can take measures in accordance with the Endangered Species Act of 1973, as amended.

### **3.5 Cumulative Impacts and Other Environmental Considerations.**

Cultural Resources. The oldest sedimentary rocks exposed in the study area are Cretaceous; all other sedimentary strata are Quaternary. Although there are many fossils in the general area, the fluvial deposits of the bottom of the Rio Grande has been unproductive. It is unlikely that this project will have any effect upon local geology or paleontological resource. The Camp Rice Formation, which occurs along the escarpment immediately west of the Rio Grande, has yielded many vertebrate fossils from several localities.

The general area surrounding the proposed project site has been inhabited by a variety of cultures for over 10,000 years. Evidence of Paleo-Indian occupation from 9500 to 4000 B.C. has been recorded in the Tularosa and Hueco basins to the east of the study area. Archaic period

sites from 600 B.C. to A.D. 250 are well represented in the study area, as are the various phases of the Jornada Mogollon period for A.D. 0 to 1400. Spanish expedition through the region began in 1581, and settlement of El Paso and the Mesilla Valley followed. Indian groups are known to have inhabited the region in small settlements beginning in A.D. 1500.

The community of Del Cerro was created to provide housing for the employees of Stahmann Farms, Inc. around 1973. Approximately eighty percent of the residents are former or current employees of Stahmann Farms, accounting for the closely-knit atmosphere of the community. Vado was established in 1876 by a group of immigrants from Lake City, Minnesota. In 1886, a new group moved into the area and laid out a townsite of what was called Earlham. The Santa Fe Railroad later had the name changed to Vado. During the Depression years several African-American families set up homesteads in the foothills east of Vado. In 1925, the County built a school for African-American children at Vado. The red brick building is still standing and is used as a community center. A small college for African-Americans was also built and operated for a few years in the foothills area. Parts of the walls were still standing a few years ago.

The State of New Mexico Office of Cultural Affairs Historic Preservation Division (SHPO) responded to a consultation request letter from Wilson & Company that there were no known sites listed or eligible for listing on the National Register of Historic Places or the State Register of Cultural Properties within the project area. The SHPO stated that construction of the proposed wastewater facilities had the potential to adversely impact unknown sites and recommended that a survey be done by a professional archaeologist prior to construction. The SHPO stated that the proposed collection system would not require an archeological survey because it appeared that the proposed collection system was limited to areas that had already been disturbed through residential and infrastructure development. At the time the Vado/Del Cerro Facilities Plan was written, an archaeological records search was in progress. A Class III (100%) ground coverage survey will be implemented prior to construction.<sup>16</sup>

Wetlands Protection and Floodplain Management. The planning area is in a designated Zone X area which includes areas protected by levees from the 100-year flood, 100-year flood areas with average depths of less than one foot or with drainage areas of less than one square mile, and 500-year flood areas. Installation of the proposed wastewater collection facilities may cross dry arroyos considered to be waters of the U.S., which according to U.S. Army Corps of Engineers (COE), can be constructed under the authority of Nationwide Permit No.12, pursuant to Section 404 of the Clean Water Act (33 CFR 330). The Nationwide Permit No. 12 authorizes discharges of dredged or fill materials into waters of the United States for utility line backfill and bedding.<sup>17</sup> The grant applicant will obtain the Section 404 Permit from the COE for project related discharge of dredged and fill material into the Rio Grande. A Storm Water Pollution Prevention Plan will be developed for control of construction sediments and control the spill of hazardous material in the construction staging area. All material will be handled and disposed of in accordance with applicable state and federal laws. The use of river water is regulated by strict guideline set forth in the Rio Grande Compact.

There are no known wetlands in the proposed project area. The proposed project site is in a non-wetland or upland area as indicated on the attached maps from the National Wetlands Inventory prepared by the United States Department of the Interior. The Mesquite Drain, Three Saints Main Canal and Del Rio Drain all lie in the vicinity of the planning area. The designation in the National Wetland Inventory Map for these drains is R4SBKCx indicating that the wetland system is an intermittent flow riverine, and that the wetland is a stream bed which is seasonally flooded artificially.<sup>18</sup> No work can be performed which affects any wetlands of over 1/3 acre, in or near any perennial surface water, or perennial reach of an interrupted or intermittent surface water of New Mexico.

Socioeconomic and Environmental Justice Issues. The area has been developed without zoning or planning restrictions and many of the lots are landlocked, do not meet County lot size, adequate utilities, or road requirements. Some subdivisions contain five or six mobile homes on one acre, housing units sharing septic tanks or cesspools, and others discharging raw waste onto the ground. The high density of homes per acre, the high water table at five to ten feet below the surface and a prominent layer of poorly draining soil, cause frequent seepage of contaminated water to the surface and present an immediate threat to public health, especially for children, who enjoy playing in water puddles after rainstorms.

Although the use of the Environmental Justice (EJ) index tool in this instance is limited, a high EJ indicator, coupled with the beneficial nature of the environmental impacts associated with the project, gives the project a high priority and makes it a prime target for assistance. The EJ analysis is based on a comparison of (1) the percentage of minority people, (2) the percentage of economically stressed households making less than \$15,000 a year, and (3) the population within a one-half mile and a four-mile radius of the site with the corresponding percentages for the state. The make up of the area's population, its high population density, and the annual household income levels all indicate that the area is economically stressed. The planning area is comprised of approximately sixty percent minority and is classified a low income area. According to 1990 data for Census Tract 18, about 35.7 percent of the residents live below the poverty level. Per capita income was \$5,980 and median household income was \$18,081. The unemployment rate for the area is 12.6 percent. Growth potential for the area is moderate, particularly since it offers only marginal water service and no wastewater services. In 1994, Vado and Del Cerro had a population of 3836 with 843 housing units. It is estimated that the population for the planning area will reach 12,000 by the year 2010.

Transportation. It is difficult to establish with certainty the level of traffic disruption that might result from the construction of the collection lines because of the creation and abandonment of the existing road system without planning or regulation.

Cross-border Impacts. The primary adverse effects beyond the national boundary are limited to the periodic excursions of odors across the border from the wastewater treatment plant particularly during abnormal weather conditions. These events will be infrequent and of short duration, and will be attenuated primarily by the distance between the source plants and the

sparsely populated areas across the border. Of significant benefit to the environment is the improved quality of the wastewater after treatment which will not have the same potential to be a source of odors. Other beneficial impacts expected from construction of the projects are the reduction in potential health vectors and communicable diseases through the elimination of the use of septic systems and privies.

A potential by-product of the proposed treatment plants that may have both adverse and beneficial impacts on the socio-economic fabric of the area is the increased growth and development. The existence of a system to handle the wastewaters may make it more appealing to industry and immigrants and tend to overload the system. However, these same phenomena may make it possible to improve the socio-economic well-being of residents of the area.

National Natural Landmarks. The Kilbourne Hole is the only natural landmark listed in the National Registry of Natural Landmarks in Doña Ana County, New Mexico. It is approximately 26 miles southwest of Las Cruces, New Mexico. It is not in the facility planning area. There is no listing of natural landmarks in the bordering county, Otero County, New Mexico.<sup>19</sup>

Other Factors. There are no coastal zones or barrier islands in the facility planning area, and the Rio Grande is the only river in the vicinity of the project. This part of the Rio Grande is not listed as a Wild and Scenic River in the Nationwide Rivers Inventory prepared by the U.S. National Park Service. The project will have no significant impact on parklands, preserves or other public lands. No mitigation measures are required.<sup>20</sup>

#### **4.0 OTHER ENVIRONMENTAL ISSUES CONSIDERED BY EPA**

##### **4.1 Unavoidable Adverse Effects.**

No significant adverse impacts on natural resources, water, wastewater, and other community infra-structures such as public schools, emergency medical care, or public safety, recreation or transportation are expected to result from the direct, secondary or cumulative effects of the operational facility. The sewer user fee is expected to be \$9.48/month<sup>21</sup> and a connection fee of \$2,000 will be assessed per customer. The connection fee may be eligible for grant funds from the Rural Development Administration.

##### **4.2 Relationship Between Local, Short Term Use of the Environment and the Maintenance/Enhancement of Long Term Beneficial Uses.**

Construction and operation of the proposed system will result in medium to high benefits to the health and economy of the area. In the short term, there will be the inconveniences, the dust and sedimentation resulting from the disturbance of the area for trenching of streets and the connecting pathways to the treatment plant. However, the long term beneficial uses of the environment will result in better social and community setting because of the correction of a public health and safety hazard.



There are no unacceptable short or long term impacts to sensitive habitat, jurisdictional wetlands, or endangered or threatened species of plants, mammals, birds, reptiles, amphibians, and fishes are expected as a result of this project. Therefore, no mitigation action is proposed. No other local, state, or federal projects are planned or underway in the project area.

#### **4.3 Irreversible and Irretrievable Commitment of Resources.**

Irreversibly and irretrievably committed resources associated with the facility are primarily the materials needed for the construction, the fossil fuels and energy resources needed to operate the facility.

## **5.0 ENTITIES TO WHOM COPIES OF THIS ENVIRONMENTAL ASSESSMENT WERE MAILED FOR REVIEW AND COMMENT**

Copies of the EA have been provided to the following agencies, groups, and individuals on the general mailing list for review and comment. Interested parties may obtain copies of the EA by contacting the EPA, Office of Planning and Coordination (6EN-XP), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733, or telephone 214-665-2258.

U.S. Bureau of Land Management  
U.S. National Park Service  
U.S. Army Corps of Engineers - Construction Operation Division - Regulatory Office  
U.S. Natural Resources Conservation Services - Field Office  
U.S. Fish and Wildlife Service - Ecological Services  
Federal Emergency Management Agency  
International Boundary and Water Commission  
New Mexico Office of Cultural Affairs - State Historical Preservation Officer  
New Mexico Environment Department - Ground Water Quality Bureau  
New Mexico Environment Department - Surface Water Quality Bureau  
New Mexico Environment Department - Air Quality Bureau  
New Mexico Environment Department, District III Manager, Las Cruces  
New Mexico Department of Game and Fish  
New Mexico Energy, Minerals and Natural Resources Department  
New Mexico Water Quality Control Commission  
Doña Ana County, Grants Administrator  
Doña Ana County, Director of Planning and Development  
Haywood R. Martin, Acting Chief, Construction Programs Bureau  
Renata Manning, Doña Ana County (Without Enclosure)  
Ramona Vallejos, Doña Ana County (Without Enclosure)  
Judith Price, Planning and Development Director, Doña Ana County  
Roosevelt Boyer, Vado Water Association  
Espy Holguin, President of Centro Fuerza Y Unidad  
Lorena Dorado, Resident of Del Cerro  
Tim McDonough, Wilson & Company  
David Herrera, President, Mesquite MDWCA (Without Enclosure)  
Ken Smith, NMED District III Manager (Las Cruces)  
Fernando R. Macias, NM State Senator, D-Doña Ana-38 (Without Enclosure)  
J. Paul Taylor, NM State Representative, D-Doña Ana-33 (Without Enclosure)

## **6.0 MAPS AND COORDINATION LETTERS**

NOT INCLUDED IN THE ELECTRONIC VERSION

## **7.0 REFERENCES AND ENDNOTES**

Letter from Tim McDonough, Project Manager. Wilson & Company, August 13, 1997.

Letter from Tim McDonough, Project Manager. Wilson & Company, May 19, 1997.

Wastewater Facilities Plan for the Communities of Vado and Del Cerro. Wilson & Company, June 1994.

Doña Ana County Ordinance 158.95. Doña Ana County Community Development Department Planning Division, 1995.

List of National Natural Landmarks. National Parks Service, Natural Resources, December 9, 1996.

National Registry of Natural Landmarks. National Parks Service, Wildlife and Vegetation Division, 1994.

The Roads of New Mexico. Shearer Publishing, 1990.

National Register of Historic Places. Historic Preservation Division, New Mexico Office of Cultural Affairs, 1996.

Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. U.S. Department of the Interior, National Park Service, September 23, 1994.

National Wetlands Inventory. U.S. Department of the Interior, Fish and Wildlife Service, December 10, 1996.

List of Prime Farmland and Soil Survey. U.S. Natural Resources Conservation Service, November 18, 1996.

The Nationwide Rivers Inventory. The National Park Service - U.S. Department of the Interior, January 1982.

Memorandum from Jim Nellesen, Environmental Specialist. NMED Air Quality Bureau, December 23, 1996.

Permits for Archaeological Survey and Human Burial Excavation. Cultural Properties Review Committee, 1997.

Soil Survey of Doña Ana County, New Mexico. US Department of Agriculture in cooperation with US Department of the Interior-Bureau of Land Management and the New Mexico

Agricultural Experiment Station, August 1980.

Liquid Waste Disposal Regulations EIB/LWDR2. New Mexico Environmental Improvement Board, January 1990.

Technical Report 43, Water Resources of the Rincon and Mesilla Valleys and Adjacent Areas, New Mexico. New Mexico State Engineer Office, 1981.

Water Quality and Water Pollution Control in New Mexico. New Mexico Water Quality Control Commission, September 1994.

Wastewater Treatment/Disposal for Small Communities, United States Environmental Protection Agency, September 1992.

Alternative Wastewater Collection Systems, United States Environmental Protection Agency, October 1991.

**Footnotes:**

1. Revised cost estimate of May 19, 1997, Wilson & Company.
2. Based on 1994 figures.
3. Vado/Del Cerro Facilities Plan, ¶5.2.6; USEPA Operation of Wastewater Treatment Plants, Vol.1.
4. Vado/Del Cerro Facilities Plan, Appendix C
5. Vado/Del Cerro Facilities Plan, ¶5.2.2; Revised Cost Estimate of May 19, 1997, Wilson & Company; USEPA Operation of Wastewater Treatment Plants, Vol.1.
6. Vado/Del Cerro Facilities Plan, ¶5.2.1; Revised Cost Estimate of May 19, 1997, Wilson & Company; USEPA Operation of Wastewater Treatment Plants, Vol.1.
7. Vado/Del Cerro Facilities Plan, ¶5.2.3; Revised Cost Estimate of May 19, 1997, Wilson & Company; USEPA Operation of Wastewater Treatment Plants, Vol.1.
8. Vado/Del Cerro Facilities Plan, ¶5.2.4; Revised Cost Estimate of May 19, 1997, Wilson & Company; USEPA Operation of Wastewater Treatment Plants, Vol.1.
9. New Mexico Water Quality Control Commission Report to Congress for 1994.
10. 1998-2000 State of New Mexico DRAFT, §303(d), List for Assessed River/Stream Reaches Requiring TMDLs.

11. Jim Davis Memorandum, NMED Surface Water Quality Bureau, July 13, 1998.
12. Appendix C of the Vado/ Del Cerro Facilities Plan, NMED, Air Quality Bureau.
13. Appendix C of the Vado/ Del Cerro Facilities Plan, NMED Department Air Quality Bureau.
14. No Effect Finding, R. Mark Wilson, U.S. Fish and Wildlife Service, July 8, 1998.
15. No Effect Finding, R. Mark Wilson, U.S. Fish and Wildlife Service, July 8, 1998.
16. Appendix E, Wastewater Facilities Plan for Vado/Del Cerro.
17. Daniel Manachuk Letter, U.S. Army Corps of Engineers, July 10, 1998.
18. National Wetlands Inventory.
19. Appendix C, Wastewater Facilities Plan for Vado/Del Cerro.
20. Appendix C, Wastewater Facilities Plan for Vado/Del Cerro.
21. Table 6.7 of the Wastewater Facilities Plan.